DOCUMENT RESUME

ED 290 781 TM 011 021

AUTHOR Abrahams, Steven; And Others
TITLE Focus-of-Evaluation and Intrinsic Motivation.
PUB DATE Aug 87
NOTE 7p.; Paper presented at the Annual Convention of the American Psychological Association (95th, New York, NY, August 31, 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Evaluation Methods; Feedback; High Schools; High School Students; *Motivation; Performance; *Performance Factors; Rewards
IDENTIFIERS *Personality Research Form

ABSTRACT

Focus of evaluation using a normative social criterion was contrasted with evaluation with a more task-oriented criterion. Fifty female and 28 male high school students played a game constructing words from a letter matrix. One-third of the subjects anticipated performance evaluation with respect to a performance criterion; one-third was offered a reward for surpassing the criterion; and the remainder expected neither evaluation nor reward. Focus was manipulated by telling half of the students that there would be a normative, comparative focus; and by telling the other half that the evaluation would be based on an absolute score. Subjects completed the Personality Research Form. Normatively focused evaluation reduced interest relative to controls receiving identical performance feedback, and it reduced interest relative to groups exposed to the same evaluation and feedback but promised a reward for doing well. Task-focused evaluation, however, raised interest relative to control and reward groups. This suggests that a task focus promotes involvement and that under these conditions concern with doing well relative to others is not related to intrinsic interest. (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Presented at the 95th Annual Convention of the American Psychological Association
New York, New York, August 31, 1987

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Steven Abrahams
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

ED290781

Focus-of-Evaluation and Intrinsic Motivation

Steven Abrahams, Ruth Wageman, and Judith M. Harackiewicz
Department of Psychology
Columbia University

External evaluation of performance on intrinsically interesting tasks tends to reduce performers' task interest (Amabile, 1979, 1983; Harackiewicz, Manderlink, & Sansone, 1984). Presumably this effect develops from perceptions of external pressure and control (Harackiewicz et al., 1984; Deci & Ryan, 1985). In practice, evaluation often comes coupled with outcome feedback that provides information about competence at the activity. Several theories of motivation predict that positive feedback should raise interest (Bandura, 1986; White, 1959), although Harackiewicz and Manderlink (1984) suggest that positive feedback raises interest only when a performer cares about doing well on the evaluated task. Both individual differences and the consequences of evaluation affect competence valuation, with achievement orientation and performance-contingent rewards tending to increase concern with performing well (Harackiewicz et al., 1984; Harackiewicz & Manderlink, 1984). Competence valuation predicts both an affective involvement in attaining competence and heightened responsivity to competence information.

The effects of evaluation and competence valuation may depend on the criteria used to judge competence. Criteria that deemphasize the normative social component of competence may foster task involvement and reduce anxiety and distraction (Ames, 1984; Dweck, 1986). This study contrasted focus of evaluation using a typical normative social criterion against evaluation with a more task-oriented criterion. Subjects played an interesting word game. Focus differences were implemented under conditions of performance-contingent reward, simple anticipated evaluation, and control conditions where subjects received performance feedback at task conclusion. We predicted that evaluation would reduce interest relative to reward and feedback control groups under a normative focus but not under a task focus, and predicted that competence valuation would mediate the effects of reward and achievement on interest, especially in normatively focused conditions.

Method

Subjects. Participating were 50 female and 28 male high school students. Mean age was 16.09 years, range: 15 to 18 years.

Procedure. Subjects played a paper-and-pencil game requiring them to construct words from a letter matrix. Subjects were randomly assigned to conditions in a 3 x 2 (Contingency x Focus) factorial design. One-third of subjects anticipated performance evaluation with respect to a performance criterion (evaluation); one-third anticipated the same and was offered a performance-contingent reward for surpassing the criterion (reward); and one-third neither expected evaluation nor was promised a reward (control). In reward and evaluation conditions, focus was manipulated before play by telling half of subjects that experimenters would evaluate performance relative to social comparison norms (normative focus) and the other half that evaluation would involve an absolute score on the task (task focus). After finishing the game, reward and evaluation subjects compared their score to the appropriate normative or absolute score. Control subjects received a focus manipulation only after finishing the game when they also compared their scores to either a normative or absolute standard. These comparisons always resulted in positive feedback.

Measures. Subjects completed the achievement scale of the Personality Research Form (Jackson, 1974). After experimental instructions but before play, subjects answered two questions -- (1) How important is it to you that you do well today?, and (2) How worried are you about how well you'll do today? These were combined ($r(78) = .44$, $p < .01$) to form a measure of competence valuation (Concern) (Harackiewicz et al., 1984; Harackiewicz & Manderlink, 1984). Between games subjects indicated how frequently certain task-relevent thoughts had occured to them. The questionnaire was based

TM 011 021

BEST COPY AVAILABLE

loosely on Sarason's Cognitive Interference Scale (Sarason, 1980). Finally subjects completed a questionnaire measure of task Enjoyment.

Results

Table 1 presents condition means for Enjoyment, adjusted for Achievement Orientation. A 3 x 2 ANCOVA with Achievement as a covariate showed a significant interaction between Contingency and Focus, $F(2,71) = 3.64$, $p < .05$. This is reflected in Table 1 by the tendency of evaluation to have positive effects on Enjoyment under a task focus, and negative effects under a normative focus. The Achievement covariate approached significance, $F(1,71) = 3.10$, $p < .09$.

We used regression to model competence valuation as a mediator between our independent variables and Enjoyment. The Contingency factor was represented by two orthogonal contrasts: (1) Reward Contrast (control, -1; evaluation, 0; performance-contingent reward, +1), and (2) Evaluation Contrast (control, -1; evaluation, +2; performance-contingent reward, -1). Focus was dichotomized (normative, -1; task, +1). We subtracted the respective means from Achievement and Concern (Cohen & Cohen, 1975). With these variables and their multiplicative interactions, we used a set of path-modeling guidelines set out by Judd & Kenny (1981a, 1981b) and produced the models presented in Figure 1.

These models show that Achievement (beta = .22) and performance-contingent rewards (beta = .25) enhance Concern across focus conditions. However Concern predicts Enjoyment strongly only under a normative focus (beta = +.71); under a task focus Concern and Enjoyment are weakly related (beta = +.15). When these effects are statistically controlled, the Evaluation Contrast still interacts significantly with Focus, indicating increased Enjoyment under task-focused evaluation (beta = +.30) and decreased Enjoyment under normatively focused evaluation (beta = -.14).

To explore cognitive processes during task engagement we regressed Task Thoughts on the main effects and interactions of the independent regression variables above. The resulting model showed a significant main effect of Focus, $F(1,71) = 6.25$, $p < .05$ (beta = +.28), indicating that task focus ($X = 5.74$) increased Task Thoughts relative to a normative focus ($X = 4.75$). The interaction of Evaluation with Achievement was also significant, $F(1,71) = 5.96$, $p < .05$ (beta = +.27), showing that evaluation lowered Task Thoughts relative to reward and feedback groups for low achievers, but not for high achievers (See Table 2).

Discussion

In this study the focus of evaluation was a critical moderator of the effects of evaluation on intrinsic interest. Normatively focused evaluation reduced interest relative to controls receiving identical performance feedback, and it reduced interest relative to groups exposed to the same evaluation and feedback but promised a reward for doing well. This replicates Harackiewicz et al. (1984). Task-focused evaluation, however, raised interest relative to control and reward groups.

The results under a normative focus argue strongly for the competence valuation described by Harackiewicz and Manderlink (1984). Performance-contingent rewards and achievement orientation raised competence valuation, and this in turn strongly enhanced Enjoyment (beta = .71). This suggests that competence valuation intensified reaction to positive performance feedback.

The task-focus results, however, suggest the operation of processes other than either competence valuation or those assumed to underlie the detrimental effects of evaluation. Evaluation raised interest, and Concern was only weakly related to Enjoyment (beta = .15). No variable satisfactorily mediated the effect of task-focused evaluation, but task focus did raise the incidence of Task Thoughts, which was positively correlated with Enjoyment ($r = .20$, $p < .05$). Note that the manipulation of task focus only involved evaluative criteria, not explicit task-focusing instructions. This suggests that a task focus does promote task involvement, and under these conditions concern with doing well relative to others -- to the extent that there is such concern -- is not related to intrinsic interest. Our thoughts measures are a first try at probing the cognitive components of involvement processes. Our ongoing research is attempting to clarify and extend our present results by including more qualitative measures of task involvement and by measuring affective processes (eg. performance anxiety) directly.

References

Amabile, T.M. (1979). Effects of external evaluation on artistic creativity. Journal of Personality and Social Psychology, 34, 92-98.

Amabile, T.M. (1983). *The Social Psychology of Creativity*. New York: Springer-Verlag.

Ames, C. (1984). Achievement attributions and self-instructions under competitive goal structures. Journal of Educational Psychology, 7 478-487.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Cohen, J. & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioural sciences*. Hillsdale, NJ.: Erlbaum.

Deci, E.L. & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. NY: Plenum.

Dweck, C.S. (1986). Motivational processes affecting learning. American Psychologist, 41, 1040-1048.

Harackiewicz, J.M. & Manderlink, G. (1984). A process analysis of the effects of performance-contingent rewards on intrinsic motivation Journal of Experimental Social Psychology, 20, 531-551.

Harackiewicz, J.M., MAnderlink, G., & Sansone, C. (1984). Rewarding pinball wizardry: Effects of evaluation and cue value on intrinsic interest. Journal of Personality and Social Psychology, 47, 287-300.

Jackson, D.N. (1974). *Manual for the Personality Research Form*. Goshen, NY.: Research Psych. Press.

Judd, C.M., & Kenny, D.A. (1981a). *Estimating the effects of social interventions*. Cambridge: Cambridge University Press.

Judd, C.M., & Kenny, D.A. (1981b). Process analysis: Estimating mediation in treatment evaluations. Evaluation Review, 5, 602-619.

Sarason, I.G. (1980). Introduction to the study of test anxiety. In I.G. Sarason (Ed.), *Test anxiety: Theory, research, and applications*. Hillsdale, NJ: Erlbaum.

White, R.W. (1959). Motivation reconsidered: The concept of competence. Psychological Bulletin, 76, 92-104.

An extended report of this research will appear as Harackiewicz, J.M., Abrahams, S., & Wageman, R. Performance evluation and intrinsic motivation: The effects of evaluative focus, rewards, and achievement motivation, Jouranl of Personality and Social PSychology, December, 1987 (Special Issue: Integrating Personality and Social PSychology). The research was supported by a grant from the Spencer Foundation. Judith M. Harackiewicz was supported by a Spencer Fellowship from the NAtional Academy of Education.

Table 1
Adjusted means for Enjoyment by Performance Contingency and Focus*

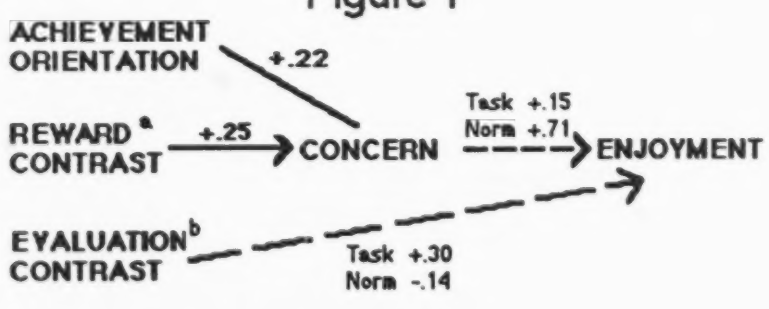
	Control	Evaluation	Performance-contingent reward
	Focus condition		
Task	22.65 SD=3.49 N=12	27.23 SD=6.59 N =13	23.22 SD=4.98 N=13
Norm	24.80 SD=5.44 N=15	2 0.16 SD=8.13 N=14	23.20 SD=8.50 N=11

* Means are adjusted for achievement orientation

Table 2
Means for Task Thoughts by Performance Contingency and Achievement Orientation

	Control	Evaluation	Performance-contingent reward
	Achievement Orientation		
Low	5.57 SD=1.87 N=13	4.07 SD=2.25 N=12	6.15 SD=2.34 N=13
High	4.77 SD=2.28 N=13	5.67 SD=1.72 N =12	5.36 SD=2.06 N=11

Figure 1



[a] Reward Contrast (Reward +1; Evaluation 0; Control -1)
[b] Evaluation Contrast (Reward -1; Evaluation +2; Control -1)

Dashed paths indicate two-way interactions with focus; these paths differ significantly ($p < .05$) between Focus conditions. Solid lines indicate significant ($p < .05$) relationships that are stable across focus.

TM011 021

Presented at the 95th Annual Convention of the American Psychological Association
New York, New York, August 31, 1987

Focus-of-Evaluation and Intrinsic Motivation

Steven Abrahams, Ruth Wageman, and Judith M. Harackiewicz
Department of Psychology
Columbia University

External evaluation of performance on intrinsically interesting tasks tends to reduce performers' task interest (Amabile, 1979, 1983; Harackiewicz, Manderlink, & Sansone, 1984). Presumably this effect develops from perceptions of external pressure and control (Harackiewicz et al., 1984; Deci & Ryan, 1985). In practice, evaluation often comes coupled with outcome feedback that provides information about competence at the activity. Several theories of motivation predict that positive feedback should raise interest (Bandura, 1986; White, 1959), although Harackiewicz and Manderlink (1984) suggest that positive feedback raises interest only when a performer cares about doing well on the evaluated task. Both individual differences and the consequences of evaluation affect competence valuation, with achievement orientation and performance-contingent rewards tending to increase concern with performing well (Harackiewicz et al., 1984; Harackiewicz & Manderlink, 1984). Competence valuation predicts both an affective involvement in attaining competence and heightened responsivity to competence information.

The effects of evaluation and competence valuation may depend on the criteria used to judge competence. Criteria that deemphasize the normative social component of competence may foster task involvement and reduce anxiety and distraction (Ames, 1984; Dweck, 1986). This study contrasted focus of evaluation using a typical normative social criterion against evaluation with a more task-oriented criterion. Subjects played an interesting word game. Focus differences were implemented under conditions of performance-contingent reward, simple anticipated evaluation, and control conditions where subjects received performance feedback at task conclusion. We predicted that evaluation would reduce interest relative to reward and feedback control groups under a normative focus but not under a task focus, and predicted that competence valuation would mediate the effects of reward and achievement on interest, especially in normatively focused conditions.

Method

Subjects. Participating were 50 female and 28 male high school students. Mean age was 16.09 years, range: 15 to 18 years.

Procedure. Subjects played a paper-and-pencil game requiring them to construct words from a letter matrix. Subjects were randomly assigned to conditions in a 3 x 2 (Contingency x Focus) factorial design. One-third of subjects anticipated performance evaluation with respect to a performance criterion (evaluation); one-third anticipated the same and was offered a performance-contingent reward for surpassing the criterion (reward); and one-third neither expected evaluation nor was promised a reward (control). In reward and evaluation conditions, focus was manipulated before play by telling half of subjects that experimenters would evaluate performance relative to social comparison norms (normative focus) and the other half that evaluation would involve an absolute score on the task (task focus). After finishing the game, reward and evaluation subjects compared their score to the appropriate normative or absolute score. Control subjects received a focus manipulation only after finishing the game when they also compared their scores to either a normative or absolute standard. These comparisons always resulted in positive feedback.

Measures. Subjects completed the achievement scale of the Personality Research Form (Jackson, 1974). After experimental instructions but before play, subjects answered two questions -- (1) How important is it to you that you do well today?, and (2) How worried are you about how well you'll do today? These were combined ($r(78) = .44$, $p < .01$) to form a measure of competence valuation (Concern) (Harackiewicz et al., 1984; Harackiewicz & Manderlink, 1984). Between games subjects indicated how frequently certain task-relevent thoughts had occured to them. The questionnaire was based

loosely on Sarason's Cognitive Interference Scale (Sarason, 1980). Finally subjects completed a questionnaire measure of task Enjoyment.

Results

Table 1 presents condition means for Enjoyment, adjusted for Achievement Orientation. A 3 x 2 ANCOVA with Achievement as a covariate showed a significant interaction between Contingency and Focus, $F(2,71) = 3.64$, $p < .05$. This is reflected in Table 1 by the tendency of evaluation to have positive effects on Enjoyment under a task focus, and negative effects under a normative focus. The Achievement covariate approached significance, $F(1,71) = 3.10$, $p < .09$.

We used regression to model competence valuation as a mediator between our independent variables and Enjoyment. The Contingency factor was represented by two orthogonal contrasts: (1) Reward Contrast (control, -1; evaluation, 0; performance-contingent reward, +1), and (2) Evaluation Contrast (control, -1; evaluation, +2; performance-contingent reward, -1). Focus was dichotomized (normative, -1; task, +1). We subtracted the respective means from Achievement and Concern (Cohen & Cohen, 1975). With these variables and their multiplicative interactions, we used a set of path-modeling guidelines set out by Judd & Kenny (1981a, 1981b) and produced the models presented in Figure 1.

These models show that Achievement (beta = .22) and performance-contingent rewards (beta = .25) enhance Concern across focus conditions. However Concern predicts Enjoyment strongly only under a normative focus (beta = +.71); under a task focus Concern and Enjoyment are weakly related (beta = +.15). When these effects are statistically controlled, the Evaluation Contrast still interacts significantly with Focus, indicating increased Enjoyment under task-focused evaluation (beta = +.30) and decreased Enjoyment under normatively focused evaluation (beta = -.14).

To explore cognitive processes during task engagement we regressed Task Thoughts on the main effects and interactions of the independent regression variables above. The resulting model showed a significant main effect of Focus, $F(1,71) = 6.25$, $p < .05$ (beta = +.28), indicating that task focus ($X = 5.74$) increased Task Thoughts relative to a normative focus ($X = 4.75$). The interaction of Evaluation with Achievement was also significant, $F(1,71) = 5.96$, $p < .05$ (beta = +.27), showing that evaluation lowered Task Thoughts relative to reward and feedback groups for low achievers, but not for high achievers (See Table 2).

Discussion

In this study the focus of evaluation was a critical moderator of the effects of evaluation on intrinsic interest. Normatively focused evaluation reduced interest relative to controls receiving identical performance feedback, and it reduced interest relative to groups exposed to the same evaluation and feedback but promised a reward for doing well. This replicates Harackiewicz et al. (1984). Task-focused evaluation, however, raised interest relative to control and reward groups.

The results under a normative focus argue strongly for the competence valuation described by Harackiewicz and Manderlink (1984). Performance-contingent rewards and achievement orientation raised competence valuation, and this in turn strongly enhanced Enjoyment (beta = .71). This suggests that competence valuation intensified reaction to positive performance feedback.

The task-focus results, however, suggest the operation of processes other than either competence valuation or those assumed to underlie the detrimental effects of evaluation. Evaluation raised interest, and Concern was only weakly related to Enjoyment (beta = .15). No variable satisfactorily mediated the effect of task-focused evaluation, but task focus did raise the incidence of Task Thoughts, which was positively correlated with Enjoyment ($r = .20$, $p < .05$). Note that the manipulation of task focus only involved evaluative criteria, not explicit task-focusing instructions. This suggests that a task focus does promote task involvement, and under these conditions concern with doing well relative to others -- to the extent that there is such concern -- is not related to intrinsic interest. Our thoughts measures are a first try at probing the cognitive components of involvement processes. Our ongoing research is attempting to clarify and extend our present results by including more qualitative measures of task involvement and by measuring affective processes (eg. performance anxiety) directly.

References

Amabile, T.M. (1979). Effects of external evaluation on artistic creativity. Journal of Personality and Social Psychology, 34, 92-98.

Amabile, T.M. (1983). *The Social Psychology of Creativity*. New York: Springer-Verlag.

Ames, C. (1984). Achievement attributions and self-instructions under competitive goal structures. Journal of Educational Psychology, 7 478-487.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Cohen, J. & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioural sciences*. Hillsdale, NJ.: Erlbaum.

Deci, E.L. & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. NY: Plenum.

Dweck, C.S. (1986). Motivational processes affecting learning. American Psychologist, 41, 1040-1048.

Harackiewicz, J.M. & Manderlink, G. (1984). A process analysis of the effects of performance-contingent rewards on intrinsic motivation Journal of Experimental Social Psychology, 20, 531-551.

Harackiewicz, J.M., MAnderlink, G., & Sansone, C. (1984). Rewarding pinball wizardry: Effects of evaluation and cue value on intrinsic interest. Journal of Personality and Social Psychology, 47, 287-300.

Jackson, D.N. (1974). *Manual for the Personality Research Form*. Goshen, NY.: Research Psych. Press.

Judd, C.M., & Kenny, D.A. (1981a). *Estimating the effects of social interventions*. Cambridge: Cambridge University Press.

Judd, C.M., & Kenny, D.A. (1981b). Process analysis: Estimating mediation in treatment evaluations. Evaluation Review, 5, 602-619.

Sarason, I.G. (1980). Introduction to the study of test anxiety. In I.G. Sarason (Ed.), *Test anxiety: Theory, research, and applications*. Hillsdale, NJ: Erlbaum.

White, R.W. (1959). Motivation reconsidered!. The concept of competence. Psychological Bulletin, 76, 92-104.

An extended report of this research will appear as Harackiewicz, J.M., Abrahams, S., & Wageman, R. Performance evluation and intrinsic motivation: The effects of evaluative focus, rewards, and achievement motivation, Jourarl of Personality and Social PSychology, December, 1987 (Special Issue: Integrating Personality and Social PSychology). The research was supported by a grant from the Spencer Foundation. Judith M. Harackiewicz was supported by a Spencer Fellowship from the NAtional Academy of Education.

Table 1
Adjusted means for Enjoyment by Performance Contingency and Focus*

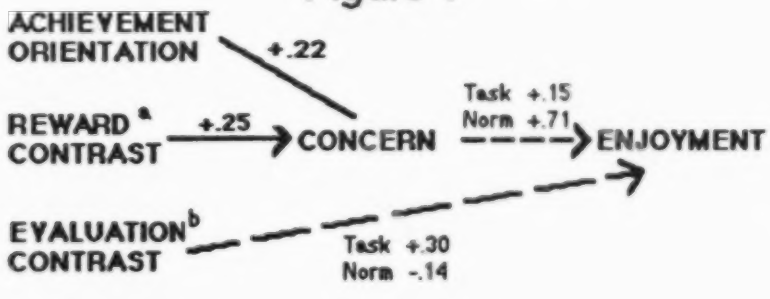
	Control	Evaluation	Performance-contingent reward
	Focus condition		
Task	22.65 SD=3.49 N=12	27.23 SD=6.59 N =13	23.22 SD=4.98 N=13
Norm	24.80 SD=5.44 N=15	2 0.16 SD=8.13 N=14	23.20 SD=8.50 N=11

* Means are adjusted for achievement orientation

Table 2
Means for Task Thoughts by Performance Contingency and Achievement Orientation

	Control	Evaluation	Performance-contingent reward
	Achievement Orientation		
Low	5.57 SD=1.87 N=13	4.07 SD=2.25 N=12	6.15 SD=2.34 N=13
High	4.77 SD=2.28 N=13	5.67 SD=1.72 N =12	5.36 SD=2.06 N=11

Figure 1



a, b Reward Contrast (Reward +1; Evaluation 0; Control -1)
Evaluation Contrast (Reward -1; Evaluation +2; Control -1)

Dashed paths indicate two-way interactions with focus; these paths differ significantly ($p < .05$) between Focus conditions. Solid lines indicate significant ($p < .05$) relationships that are stable across focus.